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ABSTRACT

Four twelfth-grade students of "distinct" personality types participated in a study of relationships between composing processes and use of cognitive strategies, of relationships between personality type and cognitive functioning, and of the effects of these interrelationships on composing. Personality profiles were drawn based on responses to the Myers-Briggs Type Indicator and the Thematic Apperception Test. Analyses of cognitive strategies were based on the work of Young, Becker, and Pike. From this investigation, composing emerges as a dynamic process subject to many influences: purpose, audience, and the student's personality type (or identity theme). Students' composing processes and use of cognitive strategies are a function of their identity themes--that is, they assimilate information and accommodate to internal and external realities to meet the demands of style, audience, and function. (Author/AA)

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The Inter-relationships Among Personality, Audience, Purpose, and Cognitive Functioning in Composing

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Running Head: Personality, Audience, Purpose, and Cognitive Functioning

CS 203 417

Abstract

This investigation produced a profile of the composing behaviors and the use of cognitive strategies in written composition for each of four twelfth grade students of "distinct" personality type. The researcher examined four students' composing processes and use of cognitive strategies, the inter-relationship between personality type and cognitive functioning, and how the inter-relationship between personality type and cognitive functioning affects each student's composing behaviors.

Personality profiles for the four students were drawn based upon responses to the Myers-Briggs Type Indicator and the Thematic Apperception Test. Cognitive strategies were analyzed based on the work of Young, Becker, and Pike, authors of Rhetoric: Discovery and Change.

From this investigation, the composing process emerges as a dynamic process subject to many variables and influences: purpose, audience, and the student's personality style (identity theme). The student's composing processes and use of cognitive strategies are a function of his identity theme; that is, he assimilates information andaccommodates to internal and external realities to meet the demands of his style, audience, and function of his assignment.

The Inter-relationships Among Personality, Audience, Purpose, and Cognitive Functioning in Composing

Teachers of English normally teach composition as though it were unimodal and emphasize what Emig (1971) calls "extensive writing," which typically emerges as the "five paragraph theme," at least for twelfth graders. The result of this narrow thinking on the part of educators is narrow curriculum development in which the process is oversimplified and underconceptualized. Research into the composing process has been meager, and before we can begin to establish meaningful instruction in composition, we must understand the process. My research into the composing process seeks to produce a profile of the composing behaviors and the use of cognitive strategies in written composition for each of four twelfth grade students of "distinct" personality type in an effort to render this enigmatic process more intelligible than it has previously been. My general pedagogical concern is with the acquisition of knowledge, broadly conceived, and the application of the principles of acquiring knowledge to the act of composing.

Rationale

Various learning theories indicate that a number of factors enter into the acquisition of knowledge: extraversion--introversion, stage of development, imagination, intelligence and memory. This nexus of forces is interrelated, yet the nature of the relationship has not been clearly established. In order to better understand

the process of composing, I propose a view derived from various theories: a model of personality types based upon Jung's theory of personality typology, Freudian ego psychology, and the analysis of cognitive functioning in writing based upon the work of Young, Becker, and Pike (1970). In addition to these measures, I analyze the subject's perceptions of his own process of composing, providing, in the words of Erikson (1964), a core of "disciplined subjectivity which is neither desirable nor possible to replace with seemingly more objective methods" (p. 53). Rather than to look at subjective or objective data, I look at what Holland calls a "transaction" between the subjective and objective, since "one cannot separate subjective and objective perspectives" (Holland, 1976, p. 6).

My theoretical base for the analysis of the role of personality in composing is provided by the works of Jung, Freud, and Holland. To summarize Jung's position, there are two distinct modes of perception or data gathering functions: sensation and intuition; and there are two distinct modes of judging or evaluating information: thinking or feeling. These functional types "correspond to the obvious means by which consciousness obtains its orientation to experience" (Jung, 1975, p. 49). According to Jung,

> sensation (i.e. sense perception) tells you that something exists; thinking tells you what it is; feeling tells you whether it is agreeable or not; and intuition tells you whence it comes and where it is going. (p. 49)

Isabel Briggs Myers (1962) identifies these as four functional types:

Sensation-Thinking, Sensation-Feeling, Intuition-Thinking, and Intuition-Feeling (p. 1). All four functions are inherent in all people, but because of constitutional make-up and outside influences, each person emerges with a preference for one style. The development of the favored functions starts at birth, and as the person develops, the less favored functions become shadowed and less controlled. Thus, a particular reality orientation is achieved.

Research into the psycholinguistic analysis of learning to read (Smith, 1971) and the psychoanalysis of literary response (Holland, 1973, 1975; Petrosky, 1974) have given new insight into the role of the ego as a governing force between the unconscious and conscious mind. This research has implications for understanding the composing process. If we look at the dynamics of the composing process, we see its cyclic nature: the mind experiences, personally or vicariously, assimilates information, composes a response, and either internalizes or verbalizes this response, whether written or oral. It appears that a response is based upon a process of composing; that is, we assimilate information into an already developed identity theme (personality style), mediate a response vis-a-vis present and past experiences, and respond via oral or written response (composition).

According to Freudian ego psychology, there are four agencies: the id, the superego, the repetition compulsion, and reality which act upon the ego. The ego acts to resolve new tasks that demand new solutions in new ways or according to old methods. These solutions, sometimes called defenses or adaptations, manifest a particular style.

"The concept of identity puts into systematic form the observation that the ego habitually adopts the same general style of solutions" (Holland, 1975, p. 124).

Holland's concept of identity theme, particularly identity as a style of multiple function, follows from Waelder's (1936) rule of multiple function, which states that whatever a human being does, he does to achieve a maximum of pleasure with a minimum of pain and a minimum of effort. "Ego-psychology has, in Hartmann's words, 'sharpened our eyes to the frequent identity of patterns in often widely divergent fields of an individual's behavior'" (Holland, 1975, p. 57). In 1966, Anna Freud noted that most analysts had begun to conceive of a "general cognitive and perceptive style of the ego" (Holland, 1975, p. 57).

The notion of the functioning of the ego seems to dispel the notion of a single magical faculty called creativity which controls artists and writers. In Poems in Persons Holland, through an analysis of the poetry of H.D., through an analysis of his own response to her poetry, and through interpretations of H.D.'s records of her psychoanalysis under Sigmund Freud, concludes that "creativity...is not some special magical afflatus but a natural, logical series of solutions for some people to demands made by inner and outer realities" (p. 59).

It seems unlikely that we could find a single process that governs composing, but it would seem, from the studies in the psychoanalysis of literature and the studies on personality, that a person

comes into the world with a rather general style or temperament that Holland calls an "initial organizing configuration," and that the child's personality develops around a particular style. If these principles are in operation, then the concepts of identity and personality become significant variables in the teaching of composition with which the English teacher must deal.

Perhaps the most significant method for analyzing the intellectual strategies employed in composition comes from Young, Becker, and Pike (1970). Pike suggests that tagmemics could make an extensive and fundamental contribution to improving composition. Indeed, informal studies utilizing his methodology have proved fruitful (Odell, 1974; Odell and Cohick, 1975). According to Young, et al., to become a better writer, the student must know the "choice points" along the process of composing a theme. The student must make appropriate choices and must have procedures for controlling this process. Pike presents his theory in the form of maxims which govern the procedures for stating problems, for discovering and ordering generalizations, for testing the adequacy of generalizations, for isolating relevant characteristics of the audience, and for developing linguistic choices in revision.

Pike's approach differs from other approaches in his focus on the process of writing rather than on the characteristics of the product. Learning to write means learning to control extremely complex processes.

Everyone who has written much at all has developed a distinctive

> way of carrying out these activities. Many of us rely heavily on intuition and habit born of past experience; others work more consciously and analytically; still others, lacking experience or blessed with great energy, depend on trial and error and consequently make numerous false starts and prepare several drafts. Thus everyone has a distinctive style, but not everyone has what might be called an 'intelligent' style--a way of proceeding that is efficient and effective. (Young, et al., 1970, p. 360)

It appears that writing involves complex cognitive activities that are influenced by psychological constructs. Composing is a creative reorganization of the writer's past experience rather than something that is transmitted or derived. Further research into the process seems warranted, particularly in light of factors such as personality, ego style, and cognitive functioning.

The Problem

The rationale for this research rests primarily on the relationship between personality type and cognitive functioning. Some rather basic questions come to mind: what is the inter-relationship between the subject's personality type and his cognitive functioning as seen in his written composition? How does this inter-relationship affect the composing process, and what are the implications of the dynamics of such interaction for teaching composition? My hypotheses are: (1) An individual's use of cognitive strategies in written composition is influenced by his personality type, and (2) An individual with

a distinct personality type utilizes distinct cognitive strategies.

The problem is to provide a descriptive profile of four students' composing processes based upon the students' personality profiles, on interviews dealing with their composing behaviors, and especially on the use of cognitive strategies employed in written composition; to describe the inter-relationship between personality type and cognitive functioning in both expressive-reflexive and expressive-extensive writing; and to determine how the inter-relationship between personality type and cognitive functioning affects the prewriting, planning, reformulation, and evaluation behaviors of the selected students.

The Study

The subjects for this investigation are four twelfth grade students enrolled in an Honors English program in a suburban high school in Pittsburgh, Pennsylvania. The Myers-Briggs Type Indicator (MBTI) was administered to 44 students in the program. Focus was placed on two indices of the students' personality preferences: mode of perception (sensing or intuition) and mode of evaluation (thinking or feeling). Combinations of the mode of perception and mode of evaluation yield four distinct personality types. These four included one student characterized as sensing-feeling (SF), one student characterized as intuitive-feeling (NF), one students characterized as sensing-thinking (ST), and one student characterized as intuitive-thinking (NT). Students with the highest preference scores for each personality type were asked to participate in this study.

The Thematic Apperception Test (TAT) was administered to these four students and subsequently read by a clinical psychologist. The TAT is a personality test which is designed to reveal the dominant drives, emotions, sentiments, complexes and conflicts of a personality. Its value as a research tool lies in its ability to reveal the underlying tendencies that the subject does not admit, or those of which he is unconscious.

The results of the MBTI and the TAT formed a personality profile for each student. The MBTI provided information about the students within the parameters of a "general type," while the TAT provided information that was more "individual." In effect, there is a general overview provided by the MBTI and an individual profile provided by the TAT.

Following the administration of the personality tests, each of the four students was interviewed regarding his composing process. The initial interview was designed to collect data on the subject's view of composition, the types of writings the student engages in most frequently, his strengths and weaknesses in writing, his feelings toward writing, his feelings when he writes, and his prewriting, planning, and reformulation behaviors. These responses, as well as the responses to similar questions after writing each of four themes, formed the basis for a description of each student's composing behaviors.

During a five week period, the students in the Honors English program were required to write four compositions, two reflexive and

two extensive, as part of their regular course work in English. All themes involved topics related in some way to the literature under study. However, the themes varied in the amount of freedom the students were permitted and the audience for whom the compositions were written. The first theme assignment followed the reading of A Day No Pigs Would Die. (See Note 1) The assignment for students was: "Imagine that you are talking to a close friend, one who will listen sympathetically to what you have to say. Tell what happened to you during a certain period of your life covering many months, perhaps even a year or so--some 'phase.'" After reading Housman's "To An Athlete Dying Young," the class was asked to write the second theme, a biographical sketch: "Imagine that you are talking to a sympathetic friend, one who will listen to what you have to say. Tell that friend what happened to someone you know during a certain period of his life covering many months, perhaps even a year or so--some 'phase.' Refer to yourself if doing so enriches the account, but keep the focus on the other person." Following the reading of Far From the Madding Crowd the students were required to write the third theme. The writing assignment was: "The minister of your church has taken ill suddenly. He calls upon you to deliver the Sunday sermon. You have just read Far From the Madding Crowd and decide to use 'The lesson Bathsheba, the main character, learns through experience' as the subject for your sermon." The students were required to write a fourth theme after reading The Heart of the Matter. The assignment was: "Discuss whether Scobie, the main character, is a tragic hero."

Following the writing of the themes, the students under investigation were interviewed regarding their composing processes and questioned about their use of cognitive strategies. The questions concerning cognitive strategies were general in nature and focused on their conscious use of focus, classification, contrast, sequence, physical context, and change. These elements are identified by Young, Becker and Pike (1970) as activities that writers engage in when examining ideas, feelings, values and facts in order to decide what they want to say in their writing. The student's use of cognitive strategies in writing was identified using a cuing system developed by Odell (1975). The number of times a particular strategy was used per T-Unit was calculated for each theme. Comparisons were made between the uses of cognitive strategies in both reflexive and extensive writing.

Data Analysis

The procedures for investigating the composing process involved the building of a case study for each student. This included a personality profile, a description of the composing process, and a description of the cognitive strategies used in the compositions. The researcher related the dominant themes in the student's personality to tendencies in his composing behavior and his use of cognitive strategies in writing.

The analysis of cognitive strategies is based upon Young's et al. (1970) rhetorical theory and provides a systematic way of looking at students' writing. Young et al. claims that in observing, thinking

about, or responding to any phenomenon, we must segment the continuum of phenomena and focus on distinct units of experience. The process of segmenting and focusing on details occurs in all events. Odell (1975) claims that by examining the grammatical subject of each clause we can learn a great deal about the way a writer thinks and perceives.

In examining the student's use of focus, I first identified the grammatical subject of each clause and counted the number of times the student focused his attention in a piece of writing. Also of interest were the types of words in the subject position. Did the student focus on people, ideas, actions, or emotions? By looking at the types of words in the subject position, we are able to make quantitative and qualitative judgments about the writer's use of focus.

After segmenting and focusing on an experience, we must provide other operations in order to understand it. We must be able to perceive what the idea, person, or emotion is and what it is not; we must know its distinctive and contrastive features. We use contrast to determine what the experience is not, and we use classification to determine what the experience is. Clues to contrast are negative connectors, comparative and superlative forms, negative words and affixes, as well as lexical words. The type of contrast is also important. An individual may contrast two things that exist; two things that could, should, or might exist; or two hypothetical situations. Clues to classification are labeling (NLVN, appositives),

use of analogy and metaphor, lexical classification, and the use of phrases that label (Odell, 1975).

Pike also contends that to understand anything, we must have a sense of nature and the extent of change it undergoes. Although the universe is in a constant state of flux, we assume, for practical purposes, that things remain essentially constant. The river that we threw a stone in yesterday is not the same river that we threw a stone in today, but, in order to survive, we assume that what is recognizable today will also be recognizable tomorrow. Our future experiences are predictable, to some extent, from our past and present experiences. However, we must reconcile ourselves to change, whether overt or internal. Linguistic clues to change are phrases which can plausably be re-written so as to include "become" and verb phrases which include "began," "stop" or their synonyms.

Pike further contends that in order to understand an experience we must look at its distribution in a larger context. What place does the experience occupy in a larger experience? Where and when did the action take place? To understand how the experience occurs, we look at the physical context and its sequence in time.

Physical context, if used, can stimulate the imagination of the reader and activate our feelings. An idea without its physical context is almost meaningless. The linguistic clues that indicate physical context are nouns that refer to a geographical location or an object in a physical setting.

Sequence refers to locating the experience in a time frame and

showing how the experience serves as a catalyst to other events. There are two types of sequences identified by Odell: time sequence and logical sequence.

Each theme was analyzed for cognitive strategies and relationships were drawn between personality style and use of cognitive strategies.

The Students

Lisa (INFP)

Through her responses on the MBTI, Lisa emerges as an introverted, intuitive, feeling, perceptive type (INFP). Her outer personality is due to intuition. She sees the possibilities and is perceptive, which gives her insight and long range vision and a curiosity about new ideas. She is ingenious and persuasive on subjects about which she is enthusiastic; these subjects are quiet but deep-rooted.

Lisa does her best when she is working on a task she believes in, since her feelings put added energy behind her efforts. This work, in the end, must contribute to something that matters to her. Her work must have a purpose behind it. Her feelings for the task cause her to approach tasks like a perfectionist, and she is usually happiest at some individual work involving personal values.

From her responses on the TAT, Lisa appears to be imaginative in an original and creative way. She approaches tasks with vigor and with a sense of challenge. However, once she gets involved in a task, she often loses sight of her original goal and lets her

imagination run away from her.

Her digressions appear to be a result of her yearnings to escape, to "just keep running," as it were, from life, apparently a result of her generally pessimistic outlook on life and her view of herself as "different" from others.

People are generally seen as lacking understanding, destructive, counteractive, and opposed to the goals of others. People are seen as despoilers of beauty; their need for power, more than greed, leads them to spoil or despoil. In general, Lisa sees people as irrational, destructive, and lacking tolerance or understanding.

Lisa sees the future positively in terms not only of being excited by it, but also as being afraid of it. She is pulled toward it, but also pulled to remain in the security of the present, to "hang on to right now," to the known. However, her general outlook is a markedly pessimistic one. Things rarely turn out well for her protagonists. They are killed; they are put away as mad; they commit suicide; they despoil beauty; they can't really communicate or resolve their differences. Even when they do good, they don't get credit for it. Things rarely turn out well for people, in her view, a dysphoric outlook on life.

Lisa sees women and herself as being capable of being powerfully destructive, vindictive, and vulnerable. She is fearful of the consequences of "acting out." She does not see positive or happy outcomes in striving. However, she is capable of assertion. She appears to be more anxious when there are fewer external de-

mands or structure placed upon her. When there are more, she gains security from the external controls.

Brad (ESFJ)

Through his responses on the MBTI, Brad emerges as an extroverted, sensing, feeling, judging type (ESFJ). He sees the realities, rather than the possibilities. He is practical, realistic, matter-of-fact, and he is concerned with the here and now. He is interested in material possessions and details of direct experience. He likes to base his plans and decisions upon known facts.

His productions on the TAT show imaginative complexity and originality, but his imagination is devoted more to escapist fantasy than to constructive creativity. His imaginative processes are more reflective of his anxious preoccupations than to constructive creativity; they are more reflective of his anxious preoccupations than they are of ability to deal with external reality or relationships with other persons. He does not constructively apply his powers of imagination in problem solving or in creativity.

Brad relates much more to events than to people, often in a detached, unemotional, accepting way. He reacts with almost oriental passivity to events, with an air of fatalism. He is concerned about his ability to deal with problems and situations, and basically he feels impotent in influencing his fate. He sees himself as having little control over what affects his life and does not feel confident in his ability to cope with external demands. He does not see himself as an actor influencing his environment or

fate, but as someone who is acted upon, often in the role of victim. When things turn out well for Brad, it is by a fortunate twist of fate or through the intervention of more powerful others. These interventions often have the flavor of the magical rescue.

There are pervasive themes of loneliness and aloneness in his record as well as depressive dysphoric tones. The future is seen as a rather confusing, frightening and lonely journey for which he lacks confidence. Some good things have happened to Brad, but they seem to have occurred in the past.

Brad's main defenses seem to be intellectualization, delay, and escape or flight into fantasy. When achievement occurs, it seems to have taken place through a good turn of fate, through a "lucky break," rather than reliance on his own abilities to cope. So he sees it.

John (ISTJ)

On the MBTI John emerges as an introverted, sensing, thinking, judging type (ISTJ). This type of combination makes for a person who is super-dependable. He has a complete, realistic, practical respect for the facts. He likes everything stated on a clear, factual basis and is able to absorb, use and remember an immense number of them. Behind this outer calm he is looking at the facts from an intensely individual angle, often a very droll one. His private reactions may be quite unpredictable, but the way he deals with them will sound sensible.

From his productions on the TAT, we see that his concerns are

those typical of adolescents; i.e.,overautonomy, separation from parental influences and control, and sexuality. He sees the world as a fairly dangerous place, and he is frightened about facing the unknown; i.e.,what lies ahead of him. He is fearful about coping with the world and the problems which lie ahead. One might say that he is afraid of freedom, but one should also bear in mind that he is like many other adolescents in this respect. In spite of his apprehensions, he feels that one must face up to things rather than turn away from them.

There are pervasive emotional tones of depression and resignation running through his productions. He seems resigned to things as they are or as they must be. While there is much unpleasantness in reality, he does not avoid it. At the same time he does not see it in his power to change it. Instead, he will give in to demands of reality which means what is expected of him, rather than asserting himself or opposing it.

Like most adolescents, he has difficulty in dealing with his impulses, especially anger and sexuality. Anger is seen as a dangerous emotion, the active expression of which brings defeating, tragic consequences. Sexuality is truly beyond him at this point.

Much is expected of John, and he feels the burden of these expectations. One wonders to what extent he is setting his own goals, and whether they are really his own goals. If these goals are not strongly expressive of parental goals, then they may be goals he set for himself in the past which now serve to bind him,

as one is bound by a vow from which one feels one cannot turn back, hence the resignation. He does express some yearnings for a chance to explore the world at his own pace in a quest for beauty and freedom. He is about to go off to college and seems to see this as more of a conforming to the way the world is, to the demands and reality, than a chance to find himself. He needs time to deal with his inner feelings, but he does not seem to feel he has much time. He needs time to try and understand things, especially to sort out his values and emotions, but he feels he has to go on and see things through, whether or not he is ready. His depression and resignation are seen in relation to the demands of external pressures and his feeling that they must be given in to no matter what one's feelings may be.

In speaking of his insecurities, one should also bear in mind that he has real feelings of security. These, however, are related to his external supports and are less well internalized. He can engage in independent thinking, but he is not so prone to engage in independent action. His grasp of reality is good, but it is tinged with pessimism. He sees hope in "being able to see beauty in different things no matter how useless it might seem."

Brian (INTP)

According to his responses on the MBTI, Brian emerges as an introverted, intuitive, thinking, perceptive type (INTP). He uses his thinking to analyze the world, but not to run it. His interests lie in the principles that underly things rather than the things themselves. He is an organizer of ideas and facts, but does not

do so for people unless the job demands it. Inwardly he becomes absorbed in analysis of problems, persevering with it without dependence on his external circumstance.

According to his productions on the TAT, Brian has a good grasp of reality and can also comfortably use his imagination in creative fantasy.

Brian is very concerned with questions of value, and, while typical of adolescents in this respect, he shows maturity in his dealings with them. That is, he appears to be working through separation and the attainment of autonomy without alienating or estranging himself from significant others. In particular he is wrestling with issues of duty or obligation, conformity, and responsibility. He takes neither the course of passive conformity nor that of assertive rebellion, but attempts to meet external demands without sacrificing his integrity. He seems able to move into the future while retaining ties with the past.

In his view it is possible for people to have different values, make their own choices and still respect and relate to each other, a mature position. One gets the impression he is a somewhat lonely, independent thinker.

He does have some feelings of security and shows that he can comfortably cope with external pressures. He also desires recognition, has some need for display, and can exhibit his prowess for the sheer personal satisfaction of doing so rather than for some external reward. He is able to cope with the new and the unusual.

Like other adolescents, his attitude toward the unknown future is partly fearful and partly anticipatory. However, he does not seek to avoid or unduly delay dealing with it.

Brian is sometimes confused by the world, but he tries to understand what is going on and charts his own course, which seems to be a somewhat lonely one. He has achieved some fairly mature understandings and seeks knowledge in order to effectively cope more with what is significant for him. He can bear others' viewpoints without surrendering his own.

The Students' Composing Behaviors

The composing behaviors for reflexive and extensive writing of the four students differ markedly, based upon purpose, audience, and personality style. First, I examine findings relative to the prewriting and planning behaviors.

Prewriting and Planning

Prewriting for reflexive writing generally takes place over a longer period of time than the prewriting for extensive writing. In some cases the prewriting for reflexive writing takes place over a period of many years. For example, for Theme One (Personal Phase), Lisa (INFP) begins to write immediately. There is no hesitation in beginning to write; the experience she wants to communicate is vivid in her memory, having been a topic of concern for many years and having been a topic of concern at the time that the assignment was given. There is no further need for thinking and planning. As she writes, one idea leads to another, and it appears that she is

unconscious of form. Lisa appears to write out of a need to share the experience she has had with a sympathetic reader, and her prewriting for reflexive writing appears to arise out of this need to share a strong emotional experience with a sympathetic audience.

Insert Table 1 about here

Lisa's prewriting for extensive writing differs from her prewriting for reflexive writing. She does not begin to write immediately, but she asks the teacher for clarification of the assignment or examines what she could possibly prove in the composition. Since her purpose is different for the two types of themes, her prewriting and planning differ for the two types of themes. In either case, she does not write from an outline, but she writes from an intuitive sense of order that she gets when she rereads her composition.

Brad (ESFJ) engages in contemplation of ideas before beginning to write when doing both reflexive and extensive writing. For Brad, the reflexive assignment calling for him to write about a phase in his life was difficult because it was "abstract" and openended. Brad is unaccustomed to writing about personal experiences and, from his personality profile, he seems reluctant to share inner experiences because he runs the risk of becoming vulnerable. As a result, for Theme One (Personal Phase) Brad projects his feelings onto a "fictional" character, but he writes in the first person.

The assignment forces Brad to make some conscious and unconscious choices. First, he must accommodate to the nature of the assignment, which he does by writing in the first person. Second, he must not let his audience know his true feelings for fear of becoming vulnerable, which he does by attaching a note to the teacher at the end of the composition: "This is not necessarily a phase that I experienced; I wrote this paper based on a fictional character, although some of these feelings I have experienced." I feel that Brad has incorporated the experience into his identity theme, mediated a response based on what was assimilated, and accommodated to the assignment without jeopardizing his identity theme. I see Brad as having a need to explore his feelings and emotions but feeling insecure about doing so. The assignment gave him the opportunity to explore his feelings, but the assignment was somewhat threatening. To counter this threat, he writes a note of explanation to the teacher. In the second theme, I see his personality projected onto Mary, the protagonist of the composition. He appears more secure in his writing because he is able to project his feelings onto a fictional character. His personality plays a great part, as does his purpose in writing, in his prewriting and planning behaviors, both in his selection of a subject and his choice of form.

Insert Table 2 about here

Brad's prewriting and planning for extensive writing differ from his prewriting and planning for reflexive writing. Class discussions prompt his prewriting, and the form that he expects the composition to take will influence his planning. He pays close attention to class discussions for proof of his thesis. After having proof for his argument, he then becomes conscious of form. The form of the composition plays a more important part in extensive writing than it does in reflexive writing. There is more concern about how he will write than about the message he will convey. In other words, the means become more important than the ends.

For Theme One (Personal Phase), John (ISTJ) reviews his life and focuses on an experience that suits the nature of the assignment as part of his prewriting experience. After reviewing his life and deciding on an experience to write about, he becomes conscious of form. He asks himself, "How can I best relate the experience?" He chooses flashback and chronological order. For John, satisfying the assignment and choosing the form of the composition are important influences in his prewriting and planning behaviors.

Insert Table 3 about here

John's prewriting and planning behaviors for extensive writing center on the sense of order he derives from class discussions and teacher comments. He takes his cues from the teacher's preferences, and he uses the teacher's or class' ideas as the basis of his theme.

He uses the ideas discussed in class for the topic of his composition, and he gets the organization for his composition from the organization that was used to discuss the topic in class. I attribute this to John's need to do things thoroughly and methodically and his reliance on authority figures, themes that run through his personality profile. His prewriting differs from reflexive to extensive writing, but this is a function of the assignment. In reflexive writing he is forced to draw on his personal experiences more than he does in extensive writing. His extensive writing tends to be a process of giving the teacher back what the teacher has told the class. John is very conscious of form as he writes. His sense of order and his methodical manner influence his rendition of the product. John uses a sympathetic friend as the audience for his first theme, but he forgets to use the sympathetic friend as the audience for the second theme. It appears that John is fulfilling the teacher's demand that he use a sympathetic friend as the audience, but the real audience for John is still the teacher.

In his prewriting for reflexive writing, Brian (INTP) seems to maintain distance from his subject, to look at various alternatives, and to choose the idea that is most clear in his memory. He doesn't appear to have strong emotional ties to any phase of his life, and he searches for a topic that satisfies the requirement of the assignment. He selects his topic by analyzing various phases of his life and writes about the phase that he can remember best. He appears to have the ability to maintain distance from his subject, even when he

writes about personal experiences, and to examine his own behaviors objectively. He does not appear to become involved in emotional entrapments but appears to be able to choose from possible alternatives as he writes. As does John, Brian pays close attention to chronological order and the orderly development of a theme. An important part of Brian's prewriting and planning is his focus on how he might make the composition unique. Creating a composition that is unique is a challenge for Brian, and without this challenge, writing becomes a mechanical, dull activity. This process of making the composition unique, more than any other, influences his prewriting and planning behaviors, although audience becomes significant at times.

Insert Table 4 about here

As does Brad, Brian does more mental planning and is more conscious of form for extensive writing than for reflexive writing. Whereas for reflexive writing he begins immediately and lets the paragraphs lead from one to another, for extensive writing he considers the means to the end. For Theme Three (Bathsheba's Lesson), the tone he wants to create influences his choice of words and his planning behaviors. Brian writes the composition as though it were a speech, which influences his choice of words and the creation of the ending sentence which is "openended." The organization that the novelist uses or an order of increasing importance influences the

way in which he organizes his extensive theme.

Closure, Reformulation and Evaluation

Lisa and Brad (feeling types) experience no closure upon completing the first theme (Personal Phase). Both students could have written more but close their compositions because of time limitations; both appear not to be able to maintain distance from their experiences. Engrossed in their topics, they express their feelings and emotions surrounding the topic. Some reformulation of the topic takes place for Lisa, who adds details and rearranges paragraphs, but for Brad, the changes are only minor word changes and punctuation changes.

John and Brian (thinking types) sense closure. John's sense of closure comes when he feels that he has completed the assignment. Brian latches onto words or phrases that give him a sense of closure. Both writers ignore feelings in their writing, preferring to report on the experiences; and as they complete the form, closure results. It appears that a sense of logical order and form influences their sense of closure. At one point during an interview, Brian says that he felt that he had done what he set out to do but also recognized that details were missing. However, he felt that the composition was acceptable as it was.

As he did with his reflexive writing, John, when he does extensive writing, senses closure because he has fulfilled the assignment. It is important to remember that John is the only student who did not see any difference in the nature of the four compositions.

He approaches each writing assignment in a similar manner and closure in all cases results when he feels that he has completed the assignment; i.e., he has fulfilled the teacher's expectations. For Brian, closure comes in extensive writing when he has written a composition in proper form. For Theme Three (Bathsheba's Lesson) he does not experience closure, but he designed the composition so that the audience would close the assignment. The audience must fill in the details when Brian says, "Think of your choice." Form also dictates his sense of closure for Theme Four (Scobie as a Tragic Hero). He completed the argument and proved his point; thus closure results.

In almost all cases evaluation of the product is based upon whether the assignment was completed. Even for reflexive writing, where the students were given the most freedom of content and form, the notion of completing the assignment serves as the yardstick for evaluation. The student's notion of what the teacher expects is very important. Unconscious cuing appears to have taken place from which the student gets a sense of what the teacher "wants." For example, Lisa says, in her evaluation of Theme One, "I think I got across how I felt, which was the assignment."

Classroom writing behaviors appear in part to be a function of personality, audience, purpose, and previous and current student-teacher interaction. Some students "perform" for the teacher by accommodating to the teacher's wishes. In an interview Brad recalls using vivid adjectives in his writing because the teacher in elemen-

tary school liked vivid adjectives. Some students appear to exhibit behaviors which complement and reinforce the teacher's expectations.

Writing Strategies

It is possible to make generalizations on the shifts in the use of cognitive strategies based on the movement of the assignment from reflexive to extensive, but these generalizations must be tempered by considering the writer's purpose, sense of audience, and personality style. If we look at the use of focus of each of the four students and the use of other cognitive strategies (represented in Table 5), then we see certain patterns emerging with regard to these shifts in usage.

Insert Table 5 about here

For Theme I (Personal Phase), the writers generally focus on "I" as an agent; however, there is one exception. Lisa, while she generally focuses on "I," sees "I" as acted upon rather than doer of the action, a use of focus that is largely determined by the purpose of the assignment and her personality style, which shows her largely in the role of victim.

As the assignments become more abstract, the tendency is to move away from egocentric writing and to become more diversified in the use of focus. While this happens generally, there is one exception. John uses "I" and "I's" view of the world throughout the four compositions. I attribute this to John's view of compo-

sition as "writing what he feels about a subject."

There does not appear to be any great discrepancy in the use of contrast among the four writers. As a rule, writers contrast what exists to what could, should, or might exist. I attribute this to the writer's level of cognitive development rather than personality, purpose, or audience. There are very few examples of contrast between two things that actually exist. The ability to make extensive use of contrast would indicate a disposition toward contrasting the realities, but this kind of contrast is used infrequently by these students. Brad uses more contrast than any of the other writers, and he also uses few classifications. There may be a tendency to use fewer contrasts when classification is used, and vice versa. Brian and John, on the other hand, use few contrasts but tend to use more classifications. I see this as a lack of experience in determining what something is, while knowing what it is not.

Regardless of the assignment, students tend to use classification to label the experience rather than to classify it metaphorically. As the assignment becomes more abstract, there is a tendency to use more classifications, although classification is not a developed strategy. Brian and John (thinking types) tend to use more classifications than Brad and Lisa (feeling types), who tend to use more contrasts. (See Table 5) Where metaphor is used, it tends to be analogy rather than poetic metaphor. Poetic metaphor may be stage specific, and relatively sophisticated, since its use in all themes by all students is very sparse. Poetic metaphor may

develop in spurts and at a later stage of formal operations.

The feeling types (Lisa and Brad) do not classify to any great extent until the assignment becomes more extensive. This may be a result of the distance of writer to the experience. The closer the writer is to the experience, the less able he is to see its distinctive features. Brian tends to use more classifications for reflexive writing than he does for extensive writing. This is contrary to the other writers, who tend to use more classifications when the assignment becomes more abstract. Brian is able to maintain distance and to evaluate his experiences, due to his sophisticated analytical processes--an indication of mature formal operations.

When Lisa and Brad use sequence for reflexive writing, it is usually time sequence. They tend not to see the causality behind events and to relate the events chronologically. As the assignment becomes more extensive, they tend to use more logical sequences, presumably because they are able to maintain greater distance from the subject. In addition, the extensive themes call for more use of logical sequence; thus, they are accommodating to the purpose of the assignment and are being influenced by a sense of audience. When the assignment is reflexive, the student can rely on expressive writing, writing to share an experience. When the assignment is extensive, the writing becomes transactional, writing to get work done. John tends not to use logical sequence, although it is apparent that he can reason logically and hypothetically. John prefers to report experiences and to expect the reader to understand the

cause-effect relationship by the manner in which the ideas are presented. On the other hand, Brian tends not to use logical sequence regardless of the nature of the theme. Instead, he tends to juxtapose ideas for the reader to interpret. For John and Brian these are preferred styles that are alluded to in their personality profiles.

The students' ability to use change varies with the assignment, although the students tend to see more overt change coupled with internal change when the assignment is reflexive. This is most true of Lisa, who sees both overt and internal change when writing a reflexive theme. However, she tends to see only internal change when dealing with extensive writing assignments. Here the nature of the assignment comes into play. When doing extensive writing she tends to deal with ideas and to ignore physical context and concrete examples. Brad tends not to observe overt change and tends to see only internal changes, particularly when the assignment is reflexive. This appears to be due to his emphasis on feelings and emotions; when the assignment becomes more abstract, he tends not to see change. Both Brian and John (thinking types) tend to avoid dealing with change. They tend to juxtapose ideas and to let the reader infer change from what is said, as they do for cause-effect sequence.

With the exception of Lisa, most of the students fail to relate experiences to physical context. Lisa relates physical context in reflexive writing, but fails to do so in extensive writing. The other three students relate physical context only sparsely and

usually only in reflexive writing.

Summary

The composing behaviors and the use of cognitive strategies of the four students under investigation are influenced by personality, purpose, and audience. These variables influence everything from the prewriting behaviors to the choice of cognitive strategies. As the student begins to write, he seems to select an approach to the topic that is determined in part by his identity theme, the demands of the assignment, and the audience for whom the composition is written. Each variable does not exert the same influence, but each variable exerts different influences under different situations. This interactive effect partially accounts for the differences among students' compositions at different times and under different circumstances. The audience influences the planning behaviors and also influences the sense of closure that the student gets when he writes. The student's sense of audience appears to shape the choices that he makes in using certain cognitive strategies such as sequence and classification.

Conclusions

At the beginning of this investigation, I hypothesized that the individual's use of cognitive strategies was influenced by his personality type and that an individual with a distinct personality type will utilize distinct cognitive strategies. From the findings of this investigation, the hypothesis that personality type plays an important role in the composing process can be accepted. Any

comprehensive theory of the composing process must then include the role of personality type as a component of the process. The discussion of the conclusions from this investigation focuses attention on personality as a component of the composing process, while also giving attention to the roles of purpose and audience, two additional variables that emerge as significant influences in the composing process. This is not to say that these are the only components of the process; they are, nevertheless, significant influences.

Composing is taken to mean the process of perception, assimilating perceptions into one's identity, accommodating to the perceptions based on the internal and external realities, and making a mediated response. It is this process that gives each individual his characteristic view of the world, and it is this process that influences the way an individual mediates a response. "Response" is part of a more general process called composing. "Response" is taken to mean a characteristic way of reacting to internal and external stimuli. Whether we are writing a composition, giving a speech, dancing, or setting the table, each of us is acting out a response to the world. A composition, to this extent,might be more appropriately termed a written "response," and the process that gives rise to the response, "composing." The act of composing itself influences the response. A look at some of the components of the composing process identified in the findings of this study yields insight into how the student composes.

All information is taken in through the sensory modalities.

The brain translates these sensory impressions into a blueprint of the outside world. As the child matures, the mind develops a preferred mode of perception. In some individuals the preferred method of perception is through the senses while for others, the preferred method is through imagination and inspiration. The second type of person might be said to be the type of person who appears to skip a step, does not place undue reliance on the senses, and prefers instead to go right to the synthesized information. The more the preferred mode of operation is used, the more dependent the individual is on this characteristic mode of perceiving. From birth, these perceptions form the individual's view of the world, a view that is personal and egocentric. As the individual's view of the world develops, this view of the world influences the acquisition of new information. When new information is processed, it is mediated by internal processes that shape the experience, and the view of the world is being reshaped to accommodate the new information. To simplify, the perception of information affects response, and the response affects the perception. Some individuals develop a method of evaluating this information that is analytical and logical, while other individuals prefer to evaluate this information through the use of feelings and sensations. Each individual develops an image of himself and his outside world (Holland's identity theme) which influences his mode of composing. This identity theme is not static, but is being continuously reordered and reshaped through outside and internal stimuli.

The composing process is not viewed as a stable or static process, but as a continuous, growing process. The response that we made to our world yesterday is modified by the information we processed and mediated since yesterday. Factors enter into the composing process that restructure the response. Anytime the individual perceives new information, this information has the distinction of reshaping the person's identity, a process that might be called accommodation. When the individual perceives information, it is assimilated into his view of the world, and if that information is inconsistent with his view of the world, he must accommodate to the situation in some way, either by rejecting the information or by accommodating to the information, which has the ultimate effect of restructuring or reshaping the individual's next response. Response, then, can be viewed as a characteristic way of reacting to the world, one that is influenced and reshaped by new experiences and new demands of the external and internal realities.

The task now becomes to relate these components of the composing process to the process of writing. As each process has its peculiarities, the writing process has as its central concern the task of translating the thought to the printed symbol in a way that will accurately reflect the thought of the writer and will be intelligible to the reader without destroying one's identity.

When the student comes to the classroom, he comes with many preconceived notions of himself and his world. He already has an identity and a characteristic mode of response. He has been influ-

enced by media, peers, family, and his study of literature and language, whether formal or informal. He has an already characteristic response process. The teacher begins the process of influencing his identity, of reshaping his responses. If prewriting experiences occur, these serve to reshape the student's view of the world, yet this view will be shaped to varying degrees depending on the strength of his identity. Some students will be greatly affected, while others will be only mildly affected.

When an assignment is made, each student responds to the assignment in a characteristic way, yet this characteristic way of responding has been modified by external demands. After assimilating past experiences, the student composes a response that accommodates purpose, audience, and teacher expectation, among other as yet undefined variables, without sacrificing his identity. For the first assignment in this investigation, the students were asked to write a composition in which they described a phase that they went through during a period of their lives. Each student selected a different experience to write about, and the process by which he selected this experience varied. Lisa and Brad (feeling types) selected very emotional experiences. For Lisa it was a period of rejection, one that made a great impression upon her. It was a period of her life that she could not understand, but she has remained bothered by the experience. Her writing was an exploration of her feelings. Brad, on the other hand, chose to write about a time of insecurity, a time when he was rejected by girls. Both stu-

dents deal with highly emotional material for the sake of exploration. For John and Brian (thinking types) the experiences they chose to write about were phases that were most clear in their minds. They do not engage in any emotional outpouring; both engage in factual renditions of their experiences. There is an emotional detachment in their writing. The degree to which this is true can be seen in their use of focus, one of the cognitive strategies used in writing. Brad and Lisa, as part of their personalities, see themselves as acted upon. When they write a reflexive theme, they focus on themselves as agents and as people who are affected by the action. On the other hand, John and Brian most often see themselves as agents who influence the action, but they rarely see themselves as being affected by the action of the story; these are also themes that run through their personality profiles.

As the assignment becomes more extensive and deals with less personal problems, Lisa sees the protagonist as the agent and places less emphasis on the protagonist as "affected" by the action. Brad, on the other hand,sees the protagonist as both "agent" and "affected" by the action of the story in all four themes. Brian and John characteristically see the protagonist as "agents" and place little emphasis on the protagonist as being "affected" by the action. The variables that influence this change in focus are the author's purpose and the audience for whom he is writing. As the assignment becomes more extensive, the writer is limited in the use of certain cognitive strategies. What he prefers often is modified to accom-

modate to external pressures.

The ability to identify the contrastive and distinctive features of an experience is influenced more by the personality than the purpose and audience. Regardless of the assignment, the writer must segment his experience and identify its features. For example, in the use of contrast on the first theme, each student's use of contrast differs. Brad (SF) uses the greatest number of contrasts (.67 per T-Unit) and tends to use contrast between what exists and what could, should, or might exist. Considering the nature of the assignment, a personal essay, and Brad's disposition toward escapist fantasy, it is conceivable that he should look to the possibilities rather than to the realities. Brad and Lisa, who also use many contrasts, tend to contrast feelings and emotions, while John and Brian tend to contrast situations. Feeling types tend to contrast feelings, and thinking types tend to contrast situations. Feeling types, especially those with a disposition toward fantasy, tend to contrast possibilities rather than to contrast realities.

Brian and John (thinking types) make the greatest use of classification. Brian uses an average of .45 classifications per T-Unit, and John uses .37 classifications per T-Unit. This compares to .29 classifications per T-Unit for Brad and .21 classifications per T-Unit for Lisa. It appears that individuals who evaluate information logically and analytically also classify information and see the similarities between and among events and situations. Those individuals who evaluate through the feelings tend to make fewer classifications, while they tend to use more contrasts than thinking types.

References to sequence vary from writer to writer, but the tendency is for feeling types to use more logical sequences. For Brad and Lisa (feeling types) the use of time sequence is relatively consistent throughout all four themes. However, as their themes become more extensive, they tend to use more references to logical sequence. Brian and John tend to rely on time sequence throughout all the four assignments, reflexive and extensive. Instead of using logical sequence, they prefer to order ideas and experiences for the reader to interpret.

Feeling types are more prone to make references to both overt and internal change. Brad and Lisa (feeling types) make the greatest number of references to internal change. As feeling types, they sense that change is taking place and report that change. Thinking types report on different stages in the development of the event, do not report the transition from one state to another, and rely on the reader to infer change because they have reported on various stages of the event. Thinking types are aware of change, but they fail to describe the change.

Lisa (NF), who makes the most references to overt change, is also the student who makes the most references to physical context, particularly if the writing is reflexive. For the first two compositions, reflexive themes, she makes .29 and .66 references respectively per T-Unit, but for the extensive themes, she makes .09 references per T-Unit for Theme Three and no references for the final theme. As the assignment becomes more extensive, there are

fewer references to physical context. Extensive writing does not demand attention to physical context, almost as if ideas can operate independently of a physical environment.

After the writer has made choices regarding the strategies that he uses to present his subject, he may choose to reformulate his ideas. Reflexive writing offers the greatest opportunity for the student to reformulate. Reflexive writing is characterized by its expressive nature, the desire to communicate information and to present the self on paper. It is the means through which an individual's identity is communicated to the outside world. Thus, as in the case of Lisa, who rearranges paragraphs to make the composition "sound right," and the other writers who plan more carefully, more reformulation takes place. The nature of the assignment also influences the type of closure that the student gets when he completes an assignment. For reflexive writing, closure generally comes when the student has made a comment on the world, but, in extensive writing, the closure comes when the student has satisfied the assignment or written in the "correct" form.

Summary

The composing process can be thought of as a continuum along which the writer makes conscious and unconscious choices about how he will render his product. Each person has a personality style that influences his composing behaviors and strategies employed in developing his idea. While each person has a preferred style, accommodations have to be made as the student does school sponsored

writing. Among these accommodations are audience, purpose, and the nature of the assignment. Any assignment, regardless of whether it is reflexive or extensive, demands a product. We sometimes make the mistake of thinking that we are permitting the student to write on anything that he wishes when he does school sponsored reflexive writing. However, the student is still accommodating to the teacher's expectations. For all the students in this investigation, explicit concerns were expressed about satisfying the assignment asked for by the teacher. John, for example, writes until he feels that he has satisfied the assignment and never turns in an assignment until he has fulfilled the requirements. His evaluation of his work is based upon whether he has fulfilled the assignment. Lisa, in responding to how she would evaluate her first theme, says that she felt good about the composition, because "she got across how she felt, which was the assignment." In actuality, this is how she perceived the assignment rather than what the assignment was. The student's view of what the teacher expects for any assignment has a great deal to do with how the students respond. Further accommodations include the student's sense of audience and his purpose. When the student has a particular audience to write for, he must make major accommodations to the reader. Audience influences his planning behaviors as well as the cognitive strategies that he uses in writing. When Brian writes Theme Three, designed as a sermon, he consciously chooses strategies to capture a listening audience. The writer's purpose also influences the choices that he makes. If the

writer's purpose is to communicate to a close friend, he explores topics that are meaningful and is unconscious of the form. But when the purpose of the writing is to get work done, he chooses a form that expedites his purpose. These appear to be variables that influence the writing process and the student's disposition toward rendering his image of the world in accord with his identity theme. These variables exert different influences under different circumstances for different personality types; any model of the composing process must include these variables if the theory is to be comprehensive.

Directions for Further Research

In this study of the composing process, I have dealt with the influence of personality in the composing behaviors and use of cognitive strategies of four students. In the course of looking at personality, I have identified other variables that influence the composing process: audience, purpose, and the nature of the assignment. If we are to develop a comprehensive model of the composing process, then we must identify the range of variables that influence this process. For example, we need to determine the role of cognition in composing and its influence on the translation of thought to written word. Since all students in this study were of approximately the same intelligence, it needs to be determined whether personality has the same influence on students of average and below average intelligence in composing behaviors and use of cognitive strategies, or whether these four students represent a gen-

eralizable sample.

We might also look toward the student's use of syntax and the role personality plays in the student's choice of syntactic structures. Why, for example, does one student write "blue sky" while another student writes, "sky of blue"? How a student translates these ideas into syntactic structures and the variables that influence this translation need to be determined.

I feel that the most significant research that could follow up this study is an investigation of the composing process of students over a long period of time. A longitudinal study needs to be undertaken to observe the changes in personality and how personality influences composing behaviors and use of cognitive strategies at different times in the individual's life. From this investigation it appears that certain cognitive strategies, particularly metaphoric classifications, are stage specific. It would be helpful to know at what stage in the child's development certain strategies develop. If they are stage specific, major revisions in language arts programs would be called for. It would be valuable to determine if changes in composing behaviors and cognitive processes develop along a steady continuum or whether they develop in spurts.

I have used T-Unit length as a standard unit of measure and average T-Unit length as a measure of syntactic fluency for the four students in this case study. Investigations into the use of the utility of the T-Unit need to be undertaken. While the T-Unit gives information about the average length of the sentences in a

given piece of writing, it yields no information about the texture of the composition. It appears to be an imprecise tool for describing the writing of students. Investigations into the use of the range of T-Unit length for different purposes might provide a useful tool for examining syntactic fluency.

We might also test Pike's theory of rhetoric in the classroom as a teaching approach. Does the rhetorical theory he provides prove to be significantly better in the teaching of composition than traditional methods? Investigations that test rhetorical theory are certainly warranted.

We might also investigate the role of the teacher expectations in the composing process. From this investigation, it appears that teacher expectations play a great part for some students in their composing behaviors and use of certain cognitive strategies. The degree to which teacher expectation plays a role in the process would prove valuable in training teachers to teach composition.

This investigation into the composing process touches on some important issues and influences in the composing process. Many areas of composition need to be explored before we can espouse a comprehensive theory of composition.

Note 1

The literary selections referred to in this study are: A Day No Pigs Would Die, a novel by Robert Peck (Dell, 1974); A. E. Housman's "To An Athlete Dying Young" from Introduction to Literature: Poems (Macmillan, 1963); Graham Greene's novel The Heart of the Matter (Viking Press, 1948); and Thomas Hardy's Far From the Madding Crowd (New American Library, 1960).

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Table 1

Lisa's Composing Behaviors

for Reflexive and Extensive Writing

Reflexive I	Reflexive II	Extensive I	Extensive II
		Prewriting	
Began immediately because of familiarity	Thought about assignment	Talks with teacher	Picked out proof for thesis as she read the novel
		Planning	
No outline	Chose chronological order	Looked at what could be proved	No outline: "I just knew"
		Closure	
No closure: familiar topic	No closure: personal nature Ran out of time	Closure: said all she wanted to say and was fed up with the assignment	Closure: said all she wanted to say
		Reformulation	
Moved paragraphs	Word changes	Tense	Rearranged words and paragraphs
Added details		Wording	
		Evaluation	
Fulfilled assignment	Fulfilled assignment	Fulfilled assignment	Comparative rating

Table 2

Brad's Composing Behaviors

for Reflexive and Extensive Writing

Reflexive I	Reflexive II	Extensive I	Extensive II
		Prewriting	
Not a personal experience	Recalls previous experience	Class discussion prompts ideas	Class discussions prompt ideas
Chose a fictional character who had real problems	Incorporates own ideas into ideas of others		
		Planning	
No outline	No outline	Outlined ideas	No outline
No ideas of plans before beginning	Starts with basic idea and others followed	Dealt with fictional characters-easy to write	Wrote introduction and developed it
			Contemplated form: 5 paragraph theme
		Closure	
No closure: theme was too general	Closure: thoughts stopped coming	Closure: five paragraph theme	Closure: five paragraph theme chronological order
Length of composition			
		Reformulation	
Word changes	Word changes	Added new ending (something he wanted to say)	Mechanics
			Sentence changes
		Evaluation	
Comparative rating	Comparative rating	Comparative rating	Comparative rating

Table 3

John's Composing Behaviors

for Reflexive and Extensive Writing

Reflexive I	Reflexive II	Extensive I	Extensive II
	Prewriting		
Began immediately	Reflexed on the topic	Thought of audience	Used outline developed by class
	Planning		
No outline	No outline	No outline	Definition of tragic hero formed outline
Reviewed life	Used catch phrase	Planned around ideas discussed in class	
	Writing led to writing		
	Closure		
Completed assignment	Completed assignment: anything else would have detracted	Completed assignment	Completed assignment: said all to support case
Wrote everything that was relevant			
	Reformulation		
Mechanical changes	Punctuation	Grammar and mechanics	None
	Evaluation		
Completed assignment	Completed assignment	Completed assignment	Completed assignment

Table 4

Brian's Composing Behaviors for

Reflexive and Extensive Writing

Reflexive I	Reflexive II	Extensive I	Extensive II
		Prewriting	
Chose ideas that were most clear	Began with catch phrase	Began with Catch phrase	Asked fellow student
		Planning	
No outline Mental time outline	No outline Planned as he wrote	Nature of assignment:speaking tone No outline: followed order of novel	Organized the composition as an argument, using points 1, 2, 3
		Closure	
Sentence forms closure	No closure: Would be repeating	No closure: audience had to close writing	Closure: completed argument
		Reformulation	
None	None	None	Changed final idea as he wrote because he like the new idea much better
		Evaluation	
Nothing formal	Whimsical and pleasurable	None	Thought it was a good "speech"

Table 5

Comparison of the Four Students' Use of

Cognitive Strategies for Reflexive and

Extensive Writing per T-Unit

		Lisa (INFP)		Brad (ESFJ)		John ISTJ)		Brian (INTP)	
		No.	PTU	No.	PTU	No.	PTU	No.	PTU
Contrast	A	17	.11	8	.06	9	.08	6	.09
	B	65	.42	96	.69	49	.45	34	.51
	C	2	.01	0	.00	0	.00	0	.00
Total		84	.54	104	.74	58	.54	40	.61
Classifi-cation	L	21	.13	26	.18	31	.29	22	.33
	M	10	.06	8	.06	4	.04	8	.12
	LEX	2	.01	7	.05	1	.01	0	.00
Total		33	.21	41	.29	36	.37	30	.45
Sequence	T	43	.28	41	.15	35	.33	12	.19
	L	19	.12	30	.21	12	.11	4	.06
Total		62	.40	51	.36	47	.44	16	.24
Change	O	15	.16	8	.06	6	.06	1	.02
	I	44	.28	34	.24	15	.14	7	.10
Total		59	.38	42	.30	21	.20	8	.12
Physical Context		45	.29	18	.13	19	.18	9	.14

Legend

Contrast:
- A: Between two things that exist
- B: Between what exists and what could, should or might exist
- C: Between hypothetical situations

Sequence:
- T: Time Sequence
- L: Logical; cause-effect

Classification:
- L: Labeling
- M: Metaphoric
- LEX: Lexical

Change:
- O: Overt Change
- I: Internal Change